B-HUNTER UAV

Program update, recent flight experience and progress in ATM

Euro UVS UAV 2002 Conference

LtCol IMM R. MARCHAL, Ir
Project Officer B-HUNTER UAV

Report Documentation Page

Form Approved
OMB No. 0704-0188

1. REPORT DATE	2. REPORT TYPE	3. DATES COVERED
02 SEP 2003	**N/A**	**-**

4. TITLE AND SUBTITLE	5a. CONTRACT NUMBER
B-HUNTER UAV Program update, recent flight experience and progress in ATM Euro UVS UAV 2002 Conference	5b. GRANT NUMBER
	5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S)	5d. PROJECT NUMBER
	5e. TASK NUMBER
	5f. WORK UNIT NUMBER
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **Euro UVS UAV Paris**	8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)	10. SPONSOR/MONITOR'S ACRONYM(S)
	11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release, distribution unlimited

13. SUPPLEMENTARY NOTES
See also ADM001676, UAV 2002 Conference & Exhibition., The original document contains color images.

14. ABSTRACT

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			
unclassified	**unclassified**	**unclassified**	**UU**	**20**	

Presentation overview

- Introduction
- B-HUNTER program update
  - Present program status
  - Critical issues
  - Way ahead and mid-term planning
- Flight experience and ATM
  - Allocated UAV flight areas
  - Flight safety process overview
- Questions

Introduction: reminder

- Contract B-HUNTER signed on Dec 14th 98
- Missions to fulfil:
  - Tactical IMINT (CCD + FLIR)
  - Target Acquisition
  - Damage Assessment
  - Artillery fire adjustment
- 3 systems ordered (6 AV and 2 GCS + GDT)
- Operated by Army unit
- Contractor: EAGLE (IAI Malat, Sonaca, Thales BE)

B-HUNTER system legacy

- B-Hunter = integration of:
  - Short-range (US) Hunter:
    - Aerial Vehicle
    - Backup uplink UHF instead of C band, no ADR

  - (IL) Searcher:
    - Advanced GCS
    - Some sensors (Air T°)

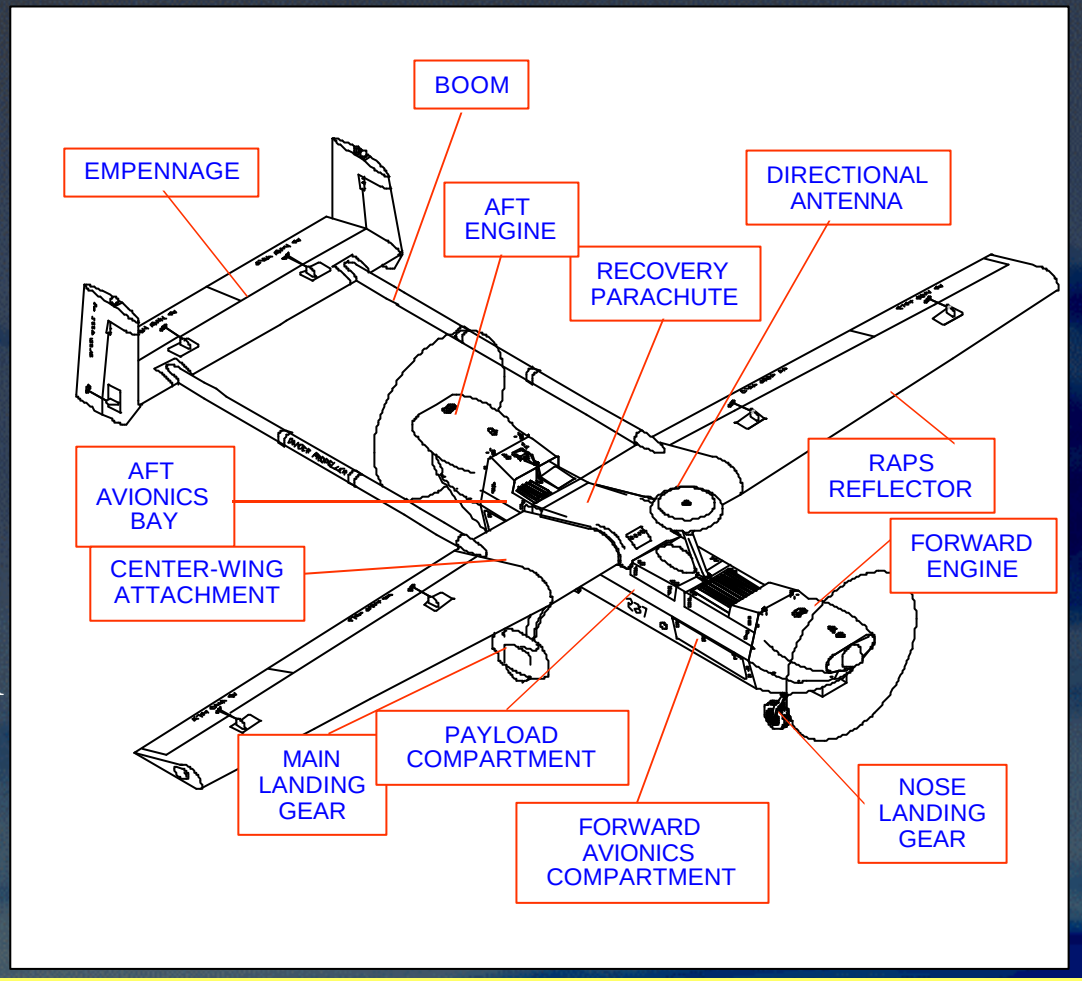
+ GFE !!!

+ PRCS

  - (CH) Ranger:
    - Automatic take-off and landing system (ATLS)
    - Multipurpose Optronic Stabilized Payload (MOSP)
    - Avionics computer

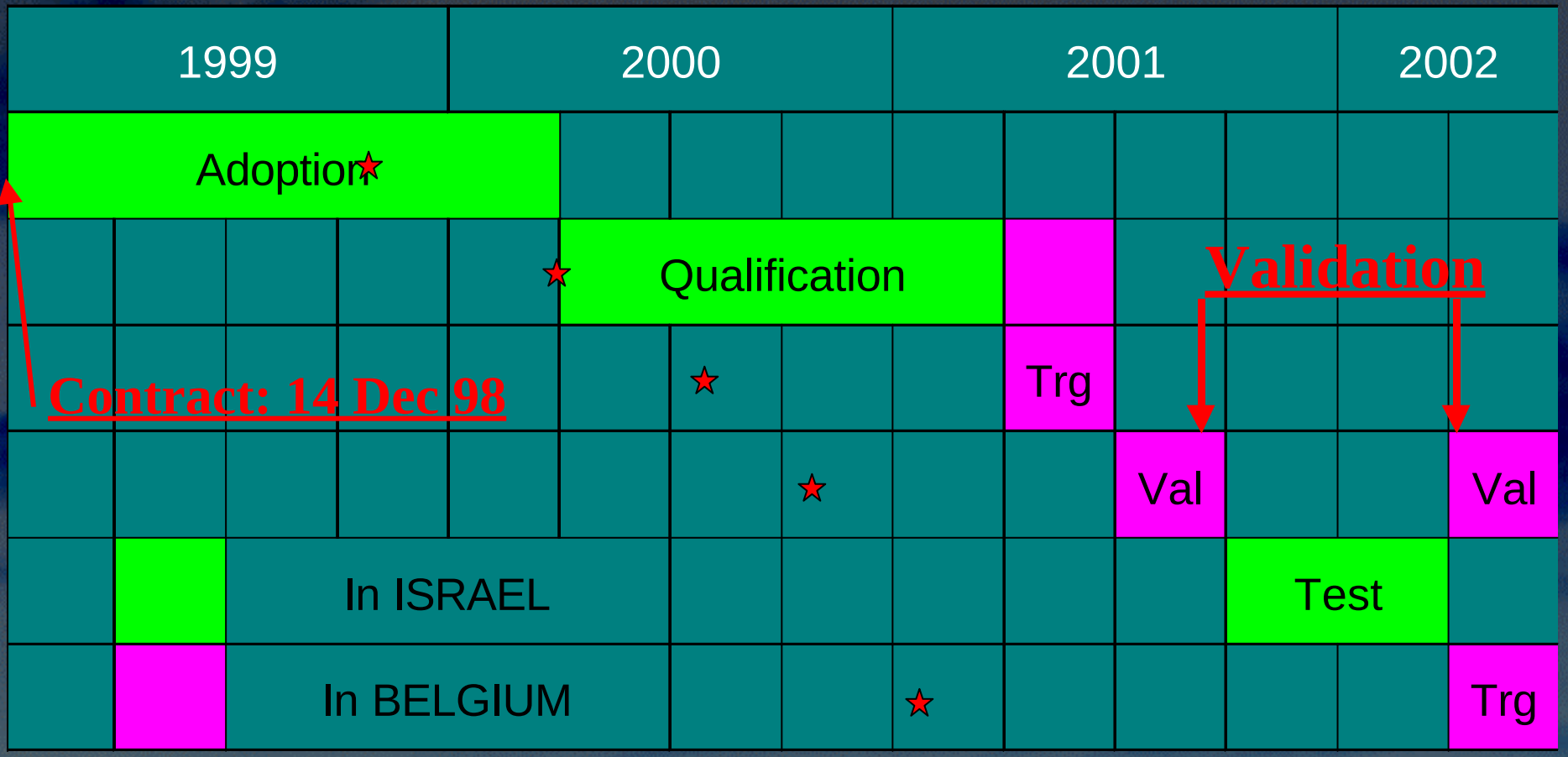
System: Aerial Vehicle (18 EA)

Weight (Empty): 532 kg
Max T/O Weight: 727 kg
Max Payload Weight: 125 kg
Length: 6.9 m
Wingspan: 8.9 m
Endurance: 11.6 hrs demonstrated
Operational Range: >125 km
Range With Relay: >200 km
Cruise Speed: 60 - 80 knots
Max Speed: 110 knots
Max Ceiling: 15,000 ft
Payload: Day/Night TV and FLIR
Launch Recovery : Unprepared terrain
300 x 25 m wheeled
0 length with RATO



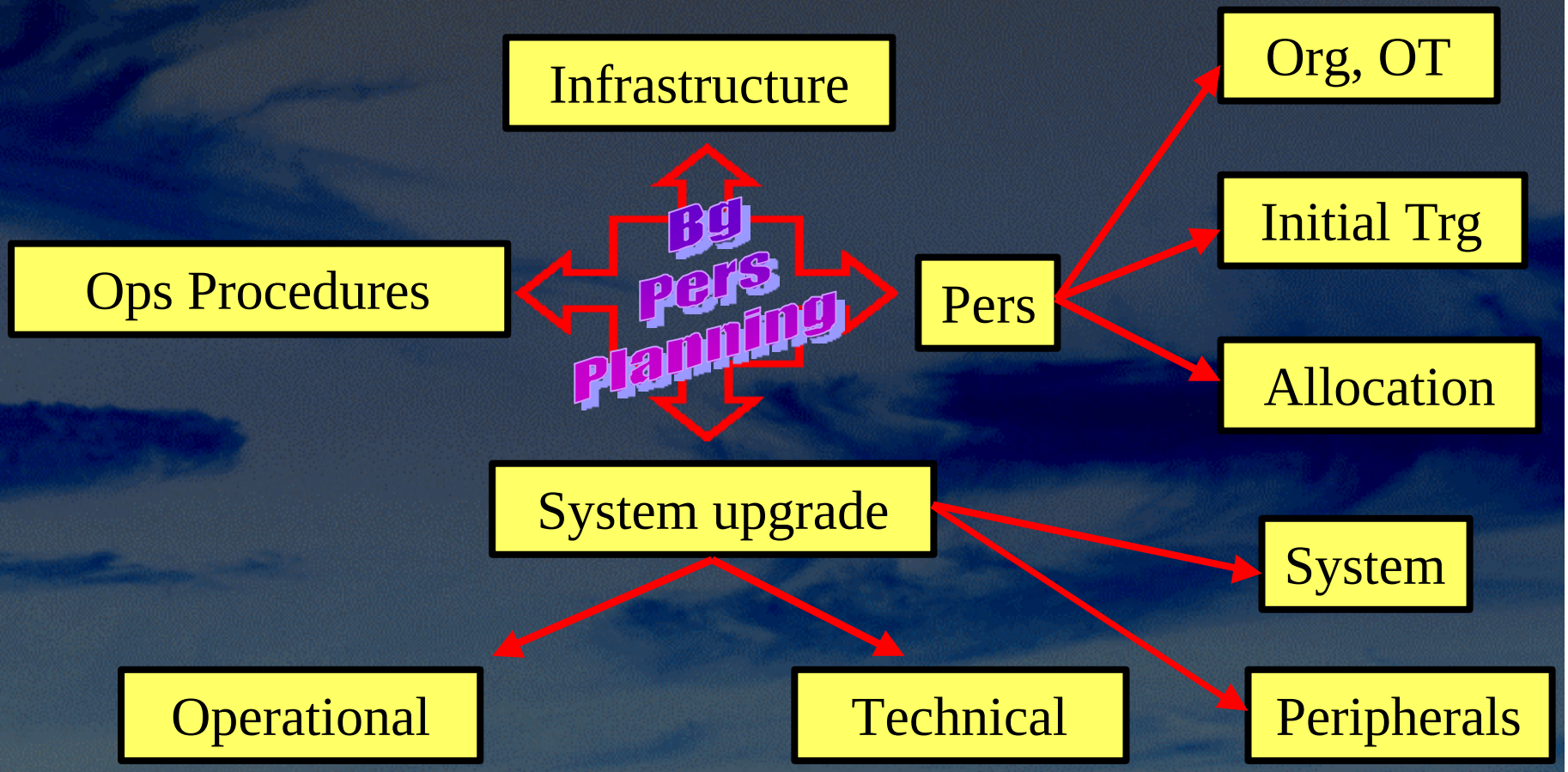
System: AGCS and GDT (6 EA)

Present situation: contractual



System validation: clarifications

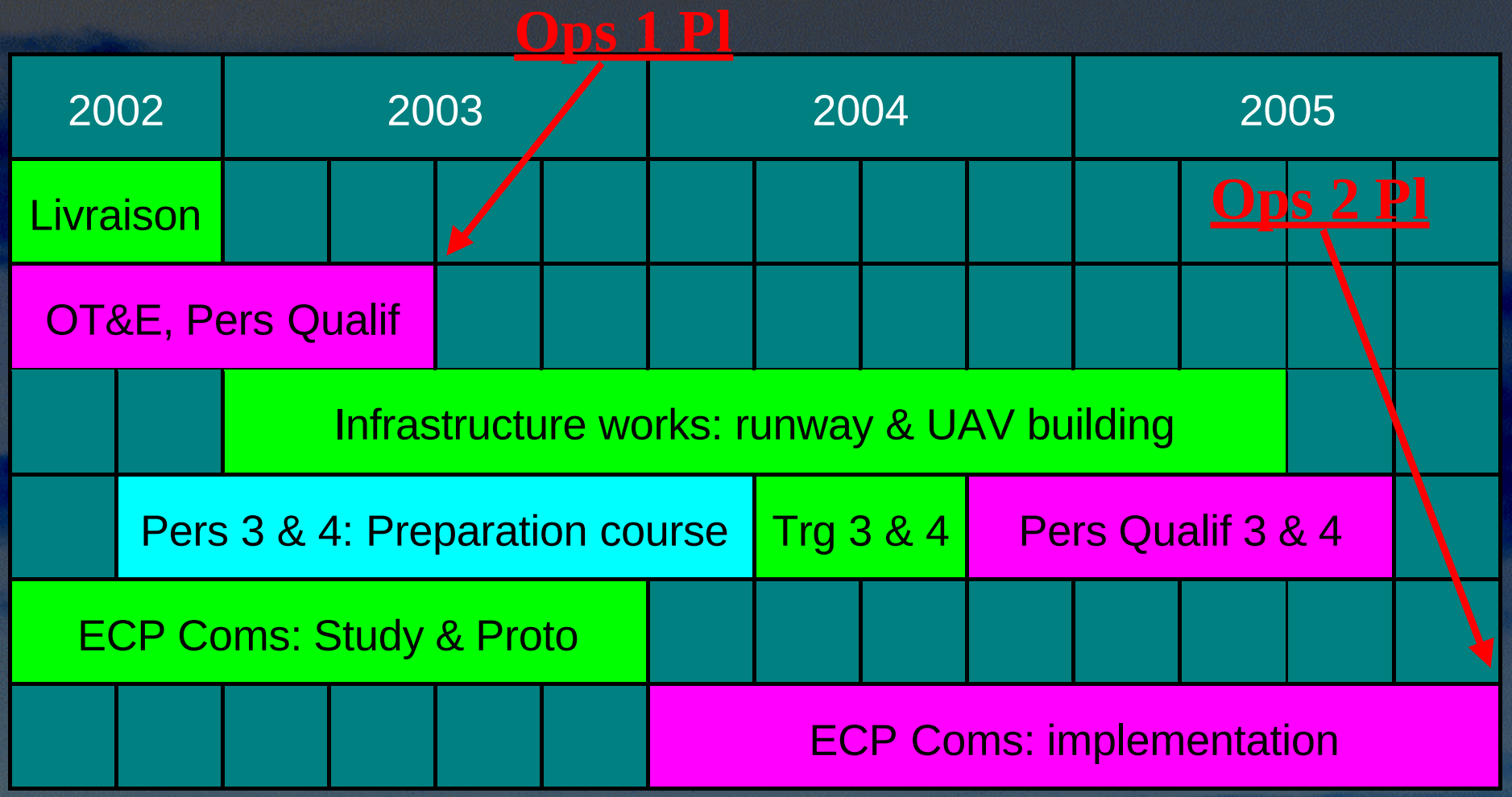
Critical Issues



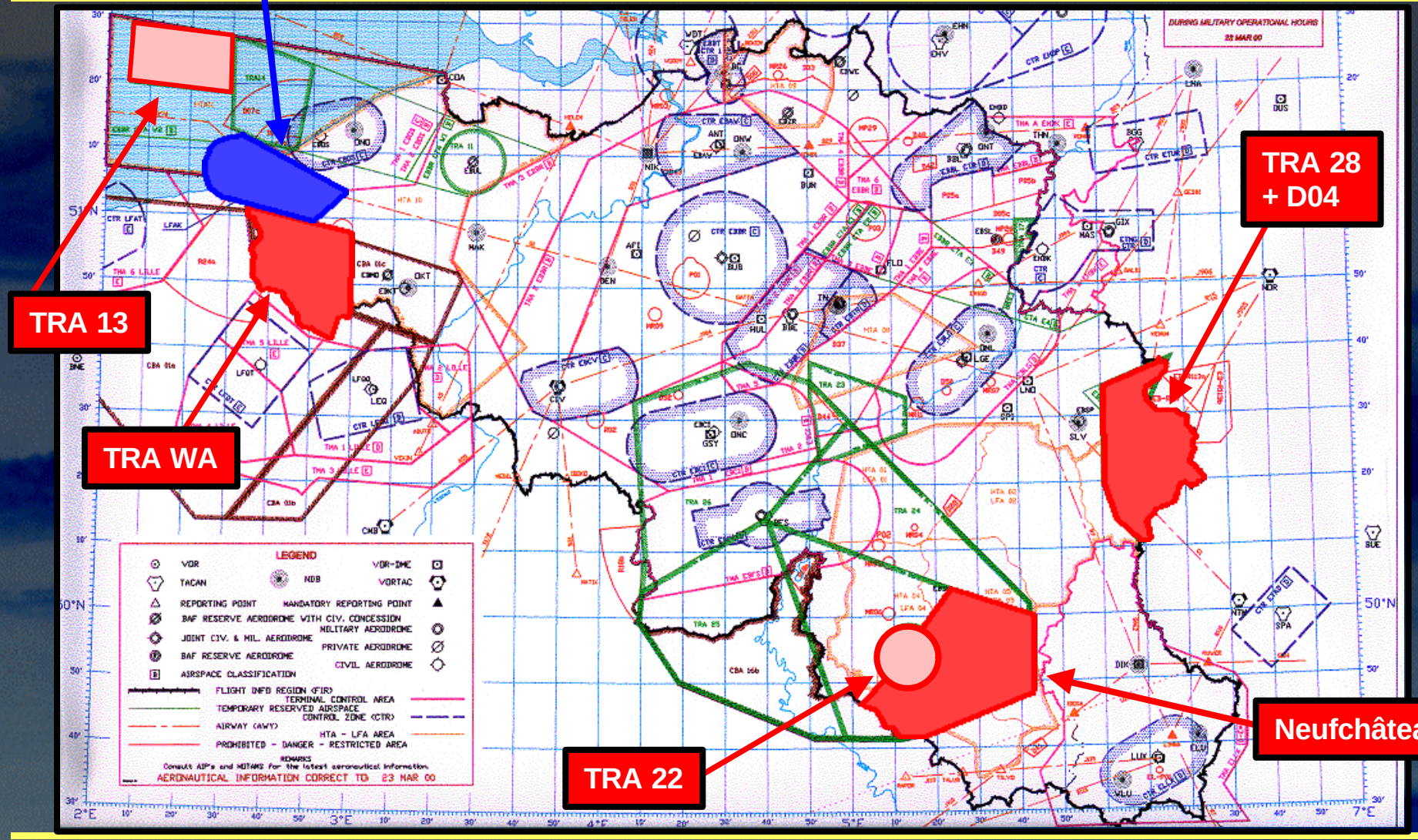
Mandatory System updates

- For technical reasons *(make system useable)*
  - Datalink update (UHF >> C-band)
  - ATC communications
  - Miscellaneous (GSTE, RAPS, Software)
- For operational reasons *(make system useful)*
  - TACOM
    - Hardware and Software interfaces
    - Communication means
  - Battery Operation Center

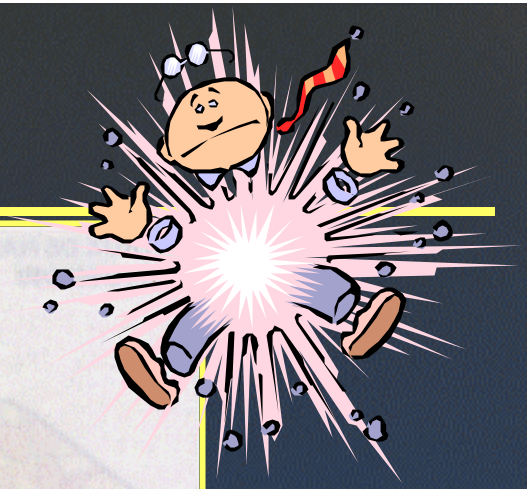
Way ahead: Mid-term planning

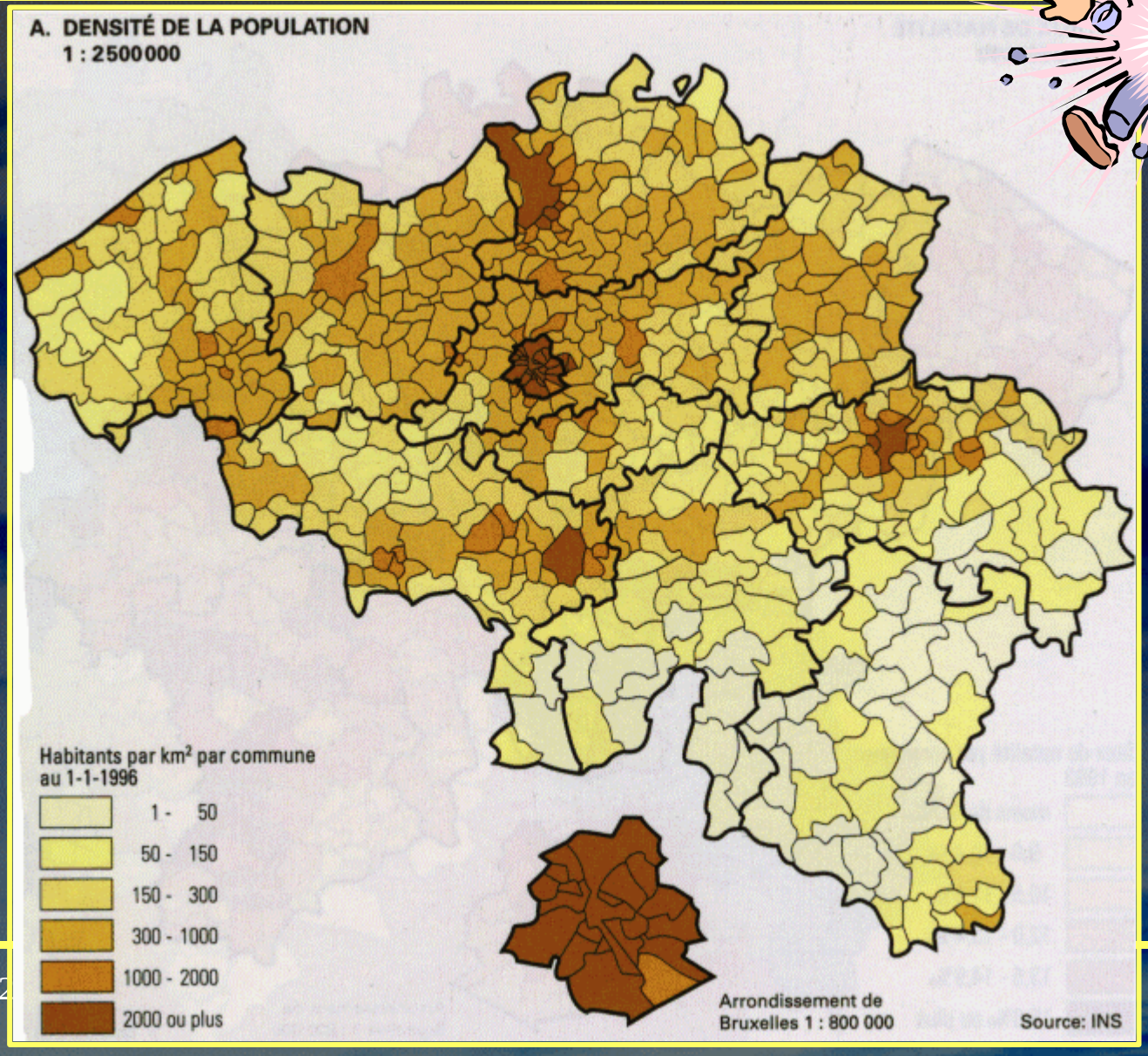


Allocated UAV flight areas

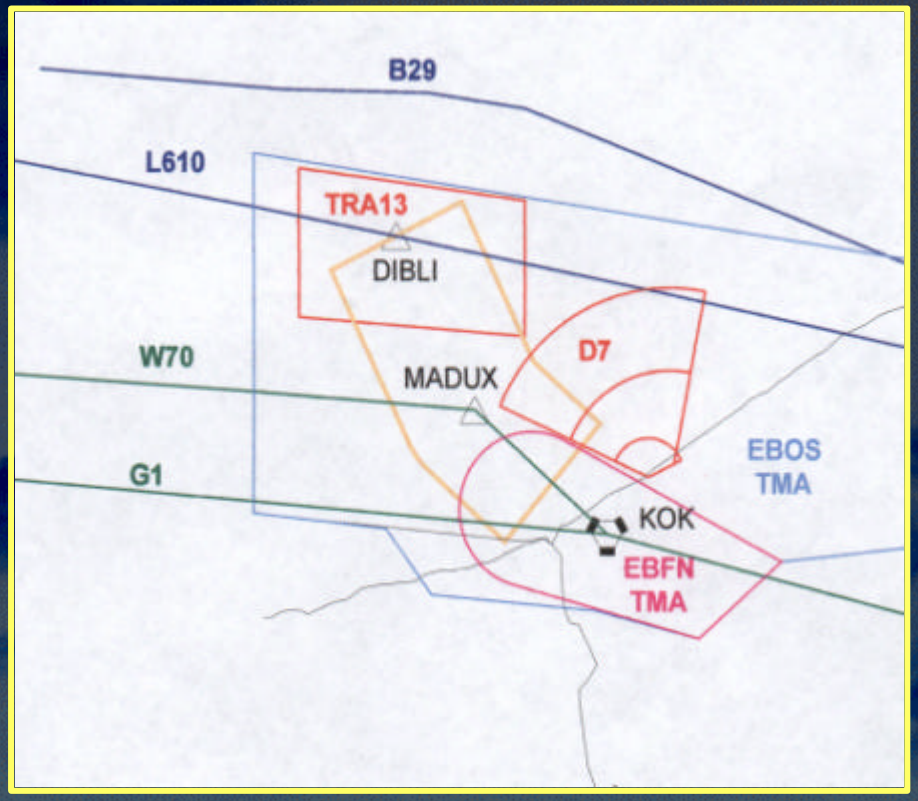


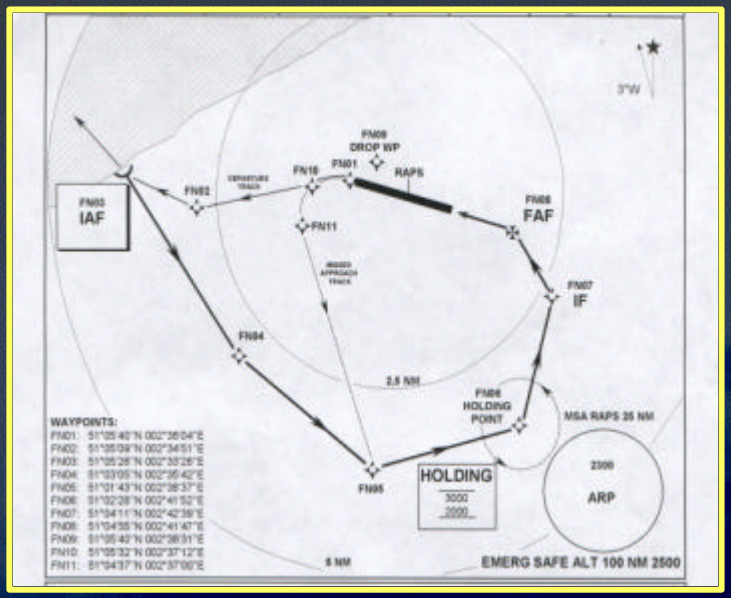
Population Density

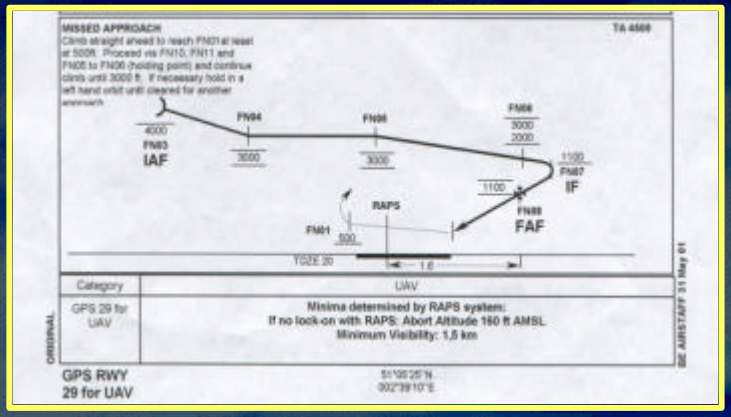




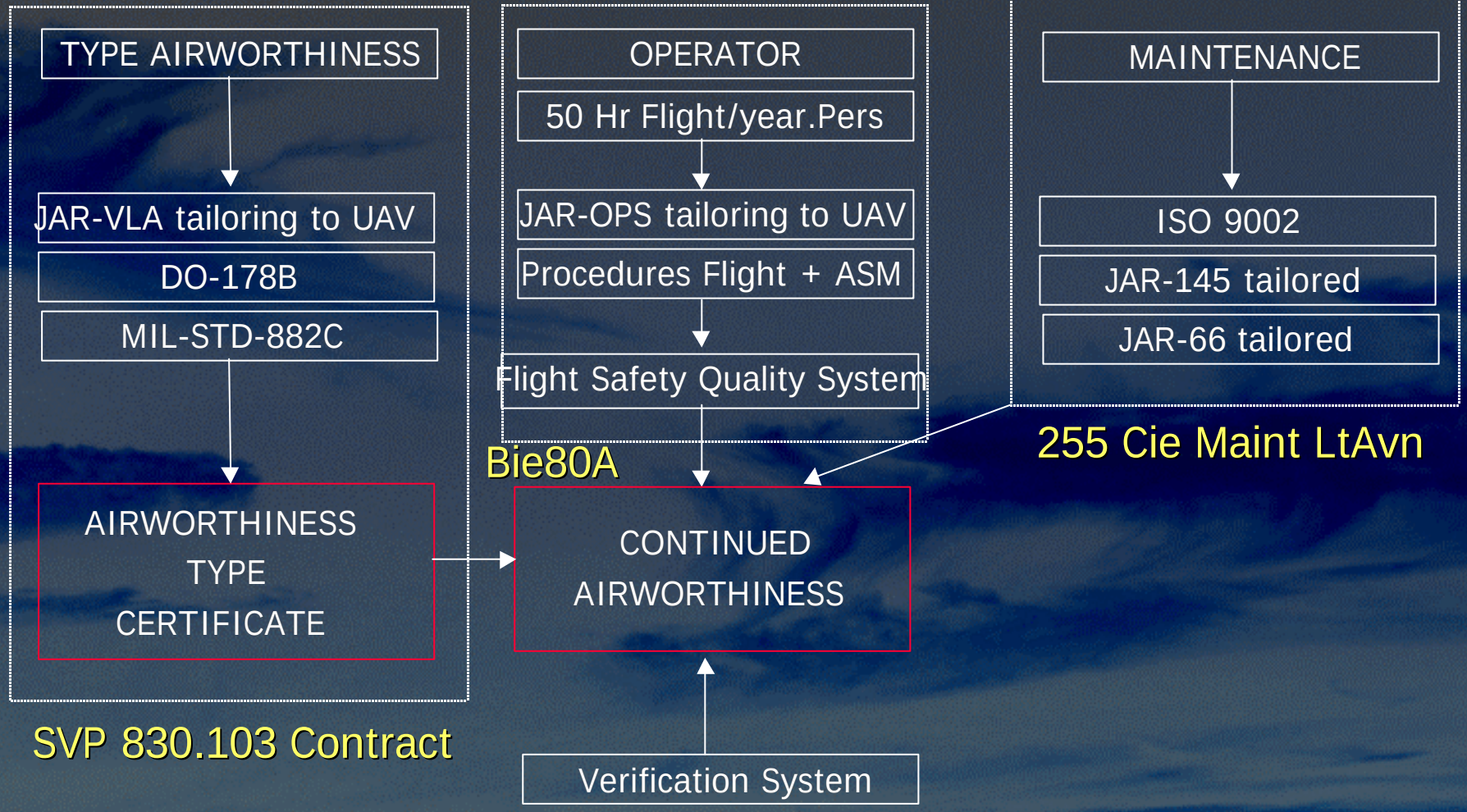
Operations in TRA 13





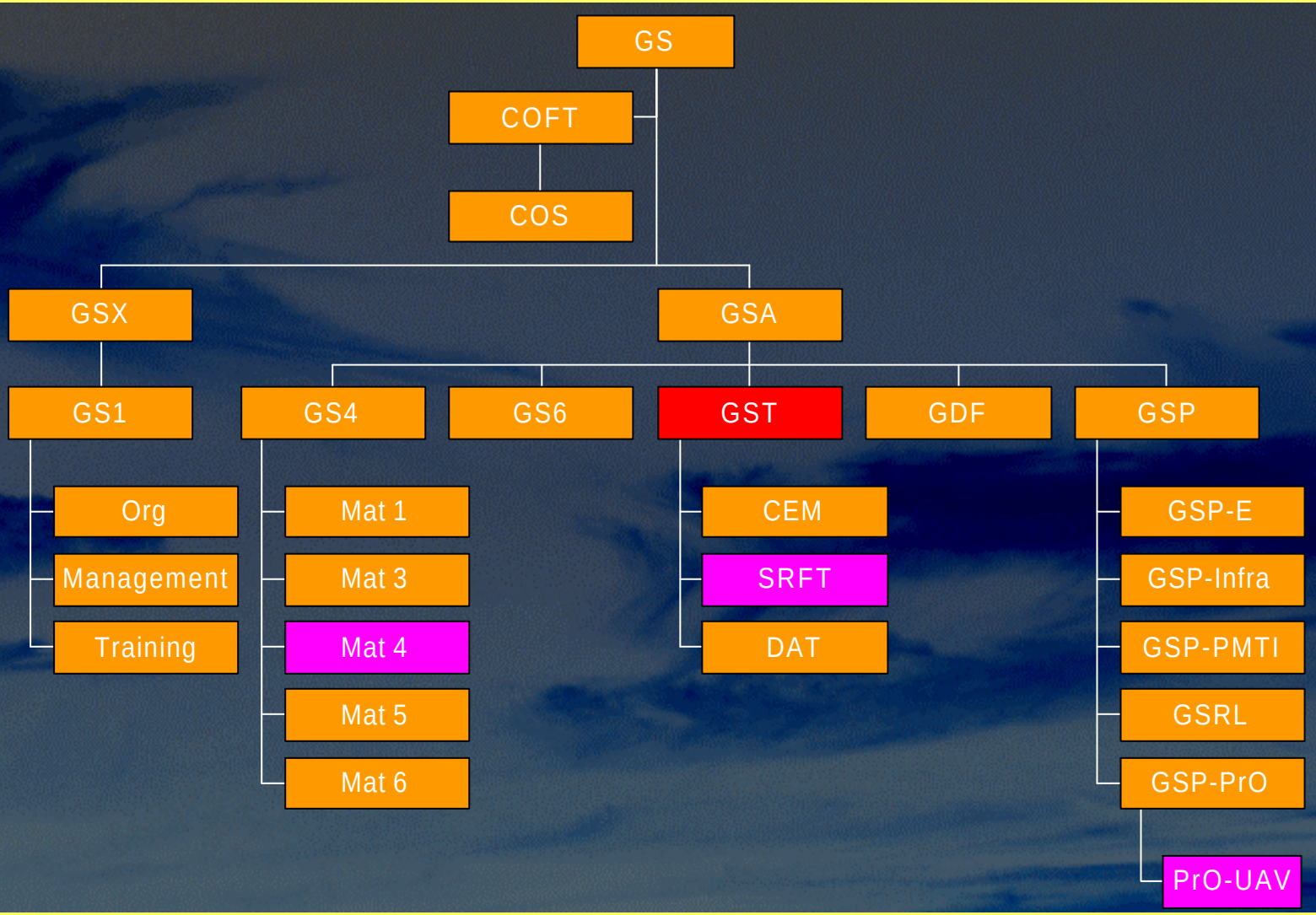


Flight safety process overview

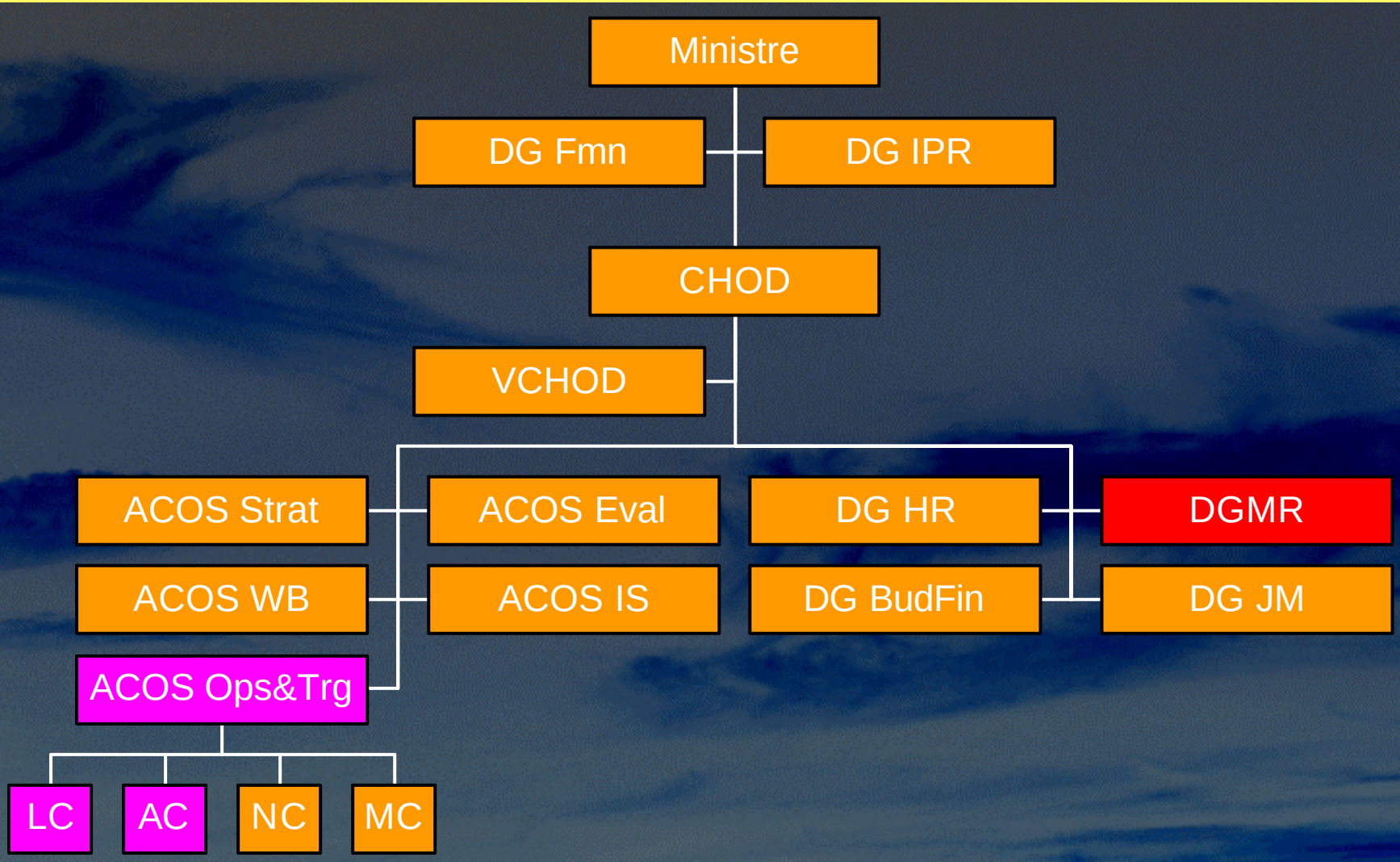


COMOPSLAND/3D - ACOS Ops&Trg - DGMR

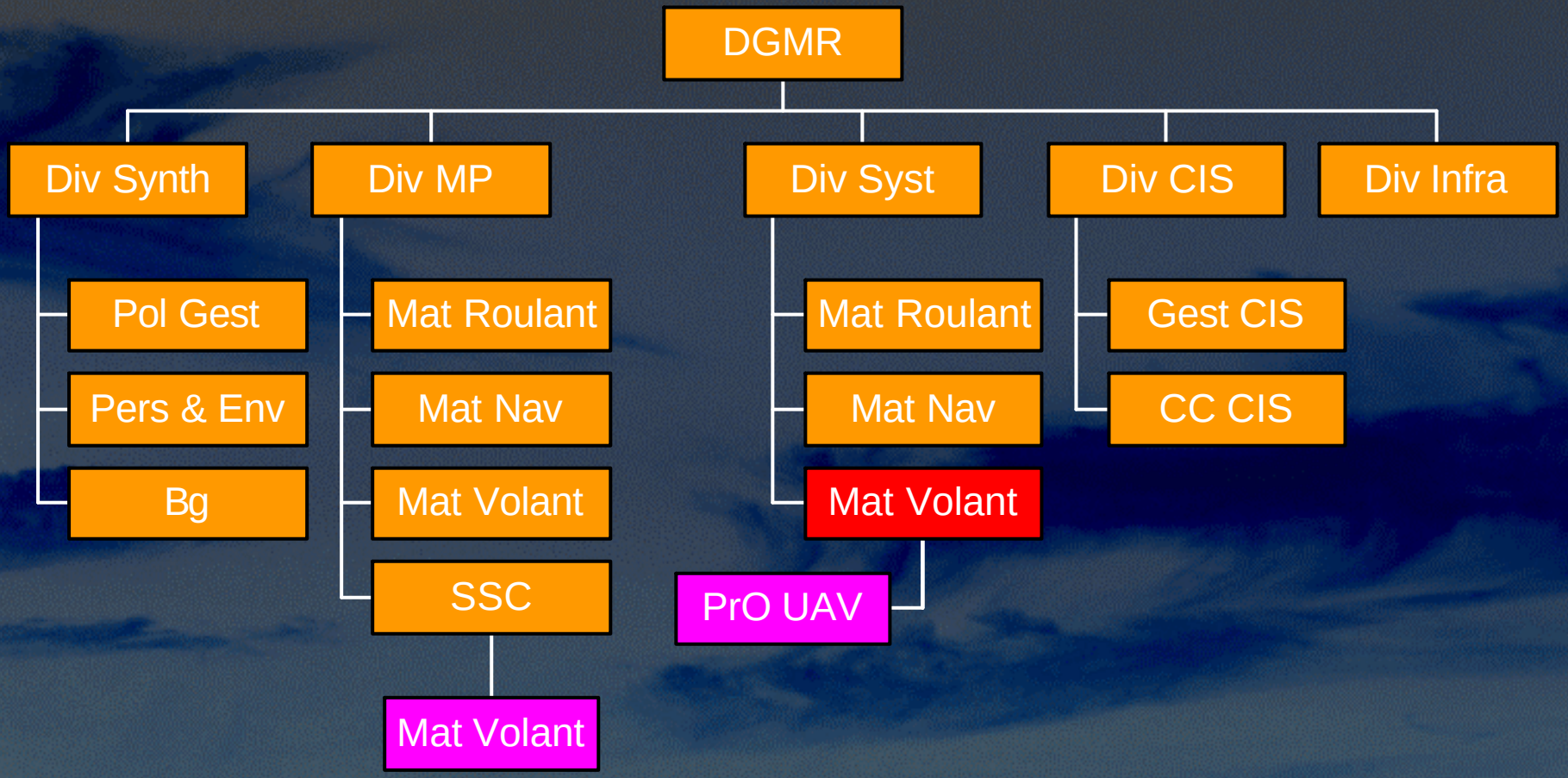
Certification: Old Organisation



New BMoD Structure



Certification: New Organisation



Conclusion

- Flying UAV just like MAV is a matter of:
  - Having a good, certified system
  - Having a skilled personnel
  - Making good procedures
  - But most important:
    - Having the will to do it
    - Going step by step
    - Informing and persuading all actors (users, populations, politicians, ...)
- There will always be a next step

Questions - Comments